

Chance of summer heatwaves now thirty times more likely

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Human-induced climate change has made the 2018 record-breaking UK summer temperatures about 30 times more likely than it would be naturally, the Met Office will say at CoP24 - in Poland – later today (6 December 2018).

Professor Peter Stott is a world-leading expert on climate attribution based at the Met Office and the University of Exeter in the UK. He said: “Our provisional study compared computer models based on today’s climate with those of the natural climate we would have had without human-induced emissions. We find that the intensity of this summer’s heatwave is around 30 times more likely than would have been the case without climate change.”

Met Office scientist Dr Nikolaos Christidis who was also involved in the study said: “Our models show that there is now about a 12% chance of summer average temperatures being as high as the UK experienced in summer 2018. This compares with a less than half per cent chance we’d expect in a natural climate.”

In the [UKCP18](#) climate projections published last week, the Met Office described that by mid-century, such hot summers could become very common, happening around 50% of the time.

Professor Stott added: “This rapidly increasing chance results from the increase in concentrations of CO₂ and other greenhouse gases in the atmosphere. The most recent figure is for 2017, which shows the atmosphere held around 405.5 parts per million of CO₂. This represents 146 % of the values in the pre-industrial era (before 1750), when the atmospheric concentration was about 280 parts per million.”

2018 was the equal-warmest summer for the UK in a series from 1910, along with 2006, 2003 and 1976.

The UK’s hottest day of the summer was on 27 July, with 35.6 °C recorded at Felsham (Suffolk); 32 °C was exceeded widely across East Anglia and south-east England on both 26 and 27 July and temperatures reached 35 °C on both dates in parts of East Anglia, Kent and central London. Temperatures above 35 °C are unusual but not unprecedented in the UK having been recorded in the summers of 2015, 2006, 2003, 1995, 1990 and 1976. More information [here](#).

Today’s announcement is part of an ongoing in-depth Met Office analysis of the causes of the 2018 heatwave. Other components to this research will include the role of changing circulation patterns and ocean temperatures.

Professor Stephen Belcher, Met Office Chief Scientist said: “The extreme temperatures experienced in the UK and around the world during summer 2018 had a significant impact upon many people’s lives. Analysis from scientists at the Met Office has shown that we now live in a climate in which heatwaves will occur much more frequently and, depending on the choices we make around greenhouse gas emissions, we could reach a point in the future when we can expect a hot summer like that of 2018 to occur every year.”